Challenges to tuberculosis control in Angola: a narrative of medical professionals

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Abstract

Backround. There is a tuberculosis (TB) epidemic in Angola that has been getting worse for more than a decade despite the active implementation of the DOTS strategy. The aim of this study was to directly interrogate health care workers involved in TB control on what they consider to be the drivers of the TB epidemic in Angola.

Methods. Twenty four in-depth qualitative interviews were conducted with medical staff working in this field in the provinces of Luanda and Benguela.

Results. The healthcare professionals see the migrant working poor as a particular problem for the control of TB. These migrants are constructed as "Rural People" and are seen as non-compliant and late-presenting. This is a stigmatised and marginal group contending with the additional stigma associated with TB infection. The healthcare professionals interviewed also see the interruption of treatment and self-medication generally as a better explanation for the TB epidemic than urbanisation or lack of medication.

Conclusions. The local narrative is in contrast to previous explanations used elsewhere in the developing world. To be effective policy must recognise the local issues of the migrant workforce, interruption of treatment and the stigma associated with TB in Angola.

Key words

Tuberculosis

Migrants

Angola

Qualitative research

Africa

Introduction

Globally Tuberculosis (TB) is on the decline and the United Nation's Millennium Development Goal [1 -3] on TB has been achieved, but Angola is a notable exception to this [4]. Angola has used the DOTS (Directly Observed Treatment, Short Course) [1,4] strategy on the recommendation of the WHO since the end of the civil war but TB incidence has been steadily increasing[4] and so has mortality. For example, in 2003 56,148 people died from TB in Angola, ten years later (in 2013) 68,480 people died from TB in Angola[4-5]. Although not yet one of the UN designated "high burden" countries [6-7], Angola is bucking the global trend of declining TB incidence and decreasing mortality.

Three main explanations have been put forward for this.

The first is that Angola's long civil war damaged its health infrastructure[8-11]. After gaining independence from Portugal, Angola suffered a twenty-seven year civil war during which the prevalence of infectious diseases increased significantly [8-9]. The civil war casts a long shadow particularly when it comes to education and the training of health care professionals, many of those now working in TB control had their training affected by the conflict[9]. But since the end of the civil war nearly as many Angolans have died directly from TB as there were excess deaths from all causes (including violence) during the civil war[10,11]. We cannot continue to try and explain the current TB epidemic by a war that ended more than a decade ago.

The second common explanation for the TB problem is urbanisation[10-12]. But any link that may exist between urbanisation and TB in Angola is not clear. The capital, Luanda, has the most cases of TB [4-5] of all the cities in Angola (Luanda is also the largest city in Angola). However, if prevalence is measured per head of population then the agricultural province of Benguela has more than double the TB prevalence (see Table 1) of Luanda over the same six-year period[4-5]. Benguela Province is notable for its low population density and is a counter-example to any urbanisation model of TB in Angola. Rural TB is an important feature of the Angolan epidemic.

Table 1. Angolan provinces with the highest prevalence of TB (2014)[3,4,9]			
	Number of cases	Prevalence per capita	Population density
Luanda Province	14,136	0.2%	2899 people/Km^2
Benguela Province	10,695	0.5%	61 people/Km^2

The third common approach to explaining TB in Angola is through the association of TB and HIV [13-20]. Many countries show a strong model of comorbidity between the two diseases[17]. How-ever this model is less useful in Angola[13] because of its relative success in managing its HIV problem[12]. The UNAIDS programme [8] put the prevalence of HIV/AIDS in Angola at 3.9% compared to an overall HIV/AIDS rate in Sub-Saharan Africa of 4.9%. In Angola although only 40% of TB cases know their HIV status of those only 11% of TB cases are HIV positive [11]. This can be compared with Chad where 43% of TB patients report their status but 23% are HIV positive [10]. There are clearly countries where there is a strong HIV/TB link but the current evidence does not support a model of HIV-driven TB in Angola.

Controlling TB in Angola is a challenge and understanding the epidemic remains an important problem for local decision-makers. The aim of this study was to directly interrogate health care workers involved in TB control on what they consider to be the drivers of the TB epidemic in Angola with the overall aim of informing future local policy making.

Method

A qualitative approach was used to explore this area. This research was conducted from a social constructionist and symbolic interactionist perspective [27]. Social constructionism applies very well to a large public health project like TB control because the project is a community and professional construct that must be maintained. The symbolic interactionist perspective gives the personal interpretation not just of experience but of the social definition of priorities and meaning.

Ethical approval was obtained from the University of Roehampton prior to commencing field work. A purposive sample of healthcare professionals was recruited in locations identified as endemic foci for TB, specifically the two provinces with the worst prevalence of TB, Luanda and Benguela. In Luanda the institutions visited included the Hospital Sanatoria, Clinic of "Bom Deus" and National Institute of Public Health. In Benguela, the Central Hospital in Benguela and Provincial Directorate of Health were visited for the purpose of recruiting healthcare professionals. A total of 24 healthcare professionals were interviewed, of whom 15 were female and 9 were male. 7 were medical doctors, 11 were nurses and 6 were community workers. All were directly involved in the diagnosis and treatment of TB.

The participants were all provided with information about the study. Participants were all Angolan in origin and were guaranteed anonymity so that they could speak freely without concern for professional or personal consequences. No participants dropped out of the study.

D.V. conducted in-depth interviews with all 24 participants, each interview lasted around 1 hour. Interviews were digitally recorded (with permission) and transcribed verbatim. Transcripts were returned to participants to validate.

The data from interviews and notes were recorded and interviews took place in Portuguese, which was then translated into English and coded. The codes are intended to capture consensus, differences and recurring concepts in the perceptions of participants. The method of analysis used was Interpretative Phenomenological Analysis[21].

A set of themes were found consistently expressed amongst the doctors, nurses and community health workers interviewed.

RESULTS - How healthcare workers explain the epidemic

Table 2. Summary of Themes

Constructing the process	**Constructing the patients**	**Constructing the profession**
The interruption of treatment	The “Rural People”	We are the poor relation
Self-medication	Stigma and TB	Belief in personal immunity
		A sense of inadequacy

1. Constructing the process

Those interviewed see the process of treatment as a major problem in the control of TB. Typically, the treatment of tuberculosis is time-consuming (taking from three months to two years) and requires drug therapy and absence from work. Some patients will be isolated at specialist sanatoria. Historically and elsewhere this has worked well but it is more likely to succeed within geographically and socially stable communities. An unintended consequence of post-war recovery in Angola has been increased social and geographic mobility which may have undermined the effectiveness of this proven approach. Two main themes emerged;

The interruption of treatment

A common narrative for the problems with TB control was the patients' failure to complete the course of treatment:

"they (the patients) stop taking their medication when they feel better but before they are well"

Doctor 1

Medical staff may feel frustrated but they also seem fatalistic:

"patients often like to interrupt treatment with anti-tuberculosis (drugs)"

Nurse1

"Many people with TB are in this city to find work, not to be ill. So they leave the sanatorium as soon as they start to feel better"

Nurse 2

The pattern of interrupted treatment is seen as particularly important because it leads to increased mortality rates amongst people who have received partial treatment:

"I met (a) family who died by tuberculosis and the older brother told me that my young brother and my sister-in-law, they said they are not feeling pain and they want to stop (their) treatment… Three weeks after interrupting treatment they started vomiting blood and they died"

Community Worker 1

Interrupted treatment is also seen as a key factor in the growing problem of drug resistance:

"Many times the first drugs we use do not work because the patient has had it many times before"

Doctor 2

The Ministry of Health figures 7 show that in 2012 of those who died from TB in that year, 68% had interrupted their previous treatment at less than half way through the full course of their treatment.

Self-medication

There is a perception that anti-TB medication is distributed widely outside of medical and governmental control. This includes informal methods of distribution, such as prescription and drug sharing within families and communities as well as the active black-market in anti-TB drugs. This ease of access to medication is seen as much more of problem than any shortage of medication:

"Auto-medication is common amongst families… TB drugs are often shared amongst them"

Nurse 4

This is linked to antibiotic resistance, according to the chairman of the Sanatoria Hospital in Luanda:

"auto-medication is the factor that cause mycobacterium (TB) to be resistant to anti-tuberculosis drugs"

Doctor 1

Drug-sharing seems to be a way of bypassing some of the drawbacks of being treated, as one Luandan nurse said:

"they can stay within the family and still receive treatment"

Nurse 3

Avoiding the stigma associated with TB is an important motivator in self-medication:

"auto-medication lets people work and be normal, it means they do not have to be seen as sick by the community"

Doctor 5

Drug-sharing is one way of bypassing some of the social and economic drawbacks such as the high level of stigma associated with TB infection while remaining well enough to stay at work.

2. Constructing the patients

How those interviewed see those they treat is informative about the barriers to effective treatment of TB.

The "Rural People" – the rural poor and migrant workers

There is a particularly strong conceptualisation of "Rural People" as a group who are seen as a problem for TB control. It is important to make clear that "Rural People is a construction used to describe not only people living in rural areas but also migrant workers in urban areas:

"Benguela has many Rural People in the city"

Community worker 4

Post-war recovery means there is migration to the cities and considerable mobility in this workforce, they may be sending money to a 'home' in the countryside but even those who spend long periods in the capital city remain perceived as "Rural People":

"the Rural People are tourists who look for work in the capital"

Doctor 4

As a group they are perceived as non-compliant with treatment:

"the Rural People go to health facility only in the critical stage (of TB)"

Community worker 2

"Rural People" has become a code for these poor migrant workers who are defined by their lack of assimilation into the urban community. When asked about non-compliance all of those interviewed identified "Rural People" as the group most likely to interrupt treatment, share drugs and present late:

"They (Rural People) will not come to the TB clinic until they cannot work and after they have already taken (anti-TB) drugs that were not prescribed for them"

Doctor 3

Stigma and Tuberculosis

A strong emergent theme is the stigma of having TB, it is constructed as characteristics of particular kinds of people. One nurse said:

"I saw a colleague who was blaming a patient saying to him you got a disease because you are dirty person with poor hygiene and HIV/AIDS"

Nurse 4

This has to be seen in the context of the (relatively) low rate of HIV amongst TB patients

The desire to avoid stigmatisation is strong enough to change behaviour. People wish to leave the stigmatised group as quickly as possible and that increases the probability that they will interrupt their treatment. Stigma is therefore a factor both in late presentation and the interruption of treatment. There is a belief that:

"wealthy Angolan people who get TB will go abroad for treatment"

Doctor 3

This assumption, "*that those who can, do*", is in line with previous research on the importance of avoiding the stigma associated with TB infection [23].

The stigma around TB is openly discussed by health professionals. The medical doctors at the National Tuberculosis Control Programme in Luanda are aware of the problem of stigma attached to a TB infection:

"Health professionals need to change their negative attitude concerning tuberculosis"

Doctor 2

3. Constructing the profession

The professional identity of the medical staff interviewed shows three main themes in its construction.

We are the poor relation

The professionals interviewed see TB control as the "poor relation" of HIV control. They express the view that TB control is deprived of resources, high quality staff and status when compared to the HIV programmes. The training of sufficient, qualified healthcare professionals is recognised as a significant problem for Angola [4,7] and TB control is seen as particularly lacking in well trained staff who are given little opportunity for professional development. Specifically:

"we do not attend international conferences on strategies to control and prevent tuberculosis. What we learned at school and the experience that we gain at work place is what we use daily in our work"

Doctor 6

International agencies bring in quality international staff but these are not viewed positively by the Angolan professionals interviewed for this study. This is because:

"the NGO are far more powerful than any Clinic Doctor"

Doctor 1

The implication is that the NGOs can decide policy and resource allocation. Whether this is true or not there is a perception that primarily western priorities and specifically those about HIV override local decision-making. This is constructed in terms of self-interest, because:

"western countries have no vaccine for HIV, but they do for TB"

Doctor 3

Belief in personal immunity

There is a persistent belief amongst those interviewed that they cannot contract TB. To contextualise this theme, the Sanatoria Hospital in Luanda conducted a study on prevalence and incidence of tuberculosis amongst staff in 2012. The study showed that 70 percent of

staff that worked at that hospital were infected by tuberculosis, 6 percent developed full tuberculosis, and 2 percent of staff had died from tuberculosis [10]:

"those of us who have worked for many years in health facilities that care for patients with tuberculosis and have never been infected by TB, we will never be infected with this disease"

Doctor 4

This conviction of personal immunity changes perceptions of risk to the extent that physicians neglect bio-safety precautions. For example, it was reported that many staff do not to bother wearing surgical masks during examinations. This risk-taking behaviour only makes sense in the light of this belief:

"we are not the kind of people that get TB"

Nurse 9

This belief in personal immunity also speaks to the stigma theme.

A sense of inadequacy

The professionals interviewed had a notably poor view of their specialism, and specifically saw TB control as attracting less well-trained staff:

"two thirds of the staff here are not trained with new strategies to control and prevent tuberculosis"

Doctor 1

There is also a view that staff in this specialism tend to be older and that this is not a field that is attractive to a new generation of health professionals:

"it is difficult to see new staff aged between 22 years to 35 years working in health facility that treat patients with tuberculosis"

Doctor 6

"(the) Majority of health professionals are aged from 40 to 64 years"

Nurse 7

Discussion

Main findings of this study

This study provides insight into the perspectives of healthcare professionals working in TB control and is summarised below.

The professional background of the interviewee (doctor, nurse or community health worker) was not found to be a significant indicator of preferred themes. However this could be an artefact of the small sample size (n=24).

From the perspective of the healthcare professionals who took part in this study, effective detection and initial treatment of TB are not seen as the main problem [7,12], except in the case of those defined as "the Rural People". This group are viewed as more likely to present late. Interruption of treatment and compliance problems, often driven by the desire to avoid the stigma that TB infection. They are therefore seen as group presenting particular problems in detection, treatment and compliance.

The study found that in line with previous research[23], a lot of stigma associated with TB infection. This stigma which changes behaviour and willingness to complete treatment. Stigma encourages interruptions of treatment and that increases drug resistant TB. The professional identity of those interviewed is complex, they see themselves as doing a vital job but at the same time have a low self-image and in particular they view themselves as resource deprived in comparison to the HIV control programme.

What is already known on this topic

Previous research has investigated TB in the wider context of WHO objectives. This study supports the findings of previous work [22-23] which identifies adherence with the treatment of TB as being a major issue, as well as the problem of stigmatisation of TB patients [21]. The problem of stigma and compliance identified in Angola is consistent with previous research[21-22]. However whereas in other counties there has been a strong link made between HIV and TB [19-23] the link between HIV and TB is not clear-cut in Angola.

What this study adds

The Angolan healthcare professionals have their own local narrative that explains the TB epidemic and it is significantly different from the models developed elsewhere. From this local perspective the spread of TB is a being driven by Angola's successful recovery from the civil war and not the damage to their infrastructure caused by the war. They challenge the "damaged infrastructure" [11] and HIV theories [13-20] and see the TB problem as a product of social change and the growth of the "Rural People" as a large, non-treatment compliant migrant labour force. It is not known if this is an accurate assessment, however it is the view of those who participated in this study – all of whom are working in the field of TB prevention in Angola.

It is worth emphasising that this local narrative explains the peculiar pattern of rural TB in Angola better than other models; migrant labourers are bringing both money and TB back to their villages. There is a problem with healthcare resourcing in rural areas but the mechanisms for spreading TB are the flow of labour, interruption and non-completion of treatment not a lack of medication.

The people interviewed see the process of TB treatment itself as hard to integrate into the social realities of Angola. They see medical policy decisions as often driven by the agendas of western NGOs, and they see attempts at TB control to be losing out in the competition for funding and staff to the international effort against HIV.

Limitations of this study

The sample is limited to 24 interviewees all of whom are professionals working in TB control in Angola. That obviously raises the question of generalisability and the results of this study emphasise the importance of local conditions in Angola. The interviews were originally conducted in Portuguese (the first language of the participants) and the transcripts had to be translated into English for coding, which may produce some loss of nuance. The sample is drawn from only two places in Angola, however these are key locations because they have the two highest levels of TB in the country.

Conclusions and policy recommendations

If it can be assumed that the views of those who participated in this study are representative of the views of health care professionals working in TB control in Angola, the findings suggest that the TB problem in Angola is due to a stigma and poor compliance during treatment. The healthcare professionals interviewed have a negative view of the role of migrant labourers in TB control and this attitude may increase the stigma associated with infection and have a broader negative impact on compliance. The uncontrolled use of antibiotics in Angola has created a breeding ground for drug-resistant strains of TB which will be a problem well beyond Angola unless the TB epidemic there is brought under control.

The successful recovery of Angola from its civil war is leading to population changes that are hindering the control of TB. A policy initiative to reduce the stigma associated with infection and an investigation into the perceptions and reality of poor compliance and late detection amongst the “Rural People” may help control the epidemic.

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